The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a crystalline semiconductor layer by heating an amorphous semiconductor layer over a substrate that has an insulating surface;

introducing an impurity of one conductivity type into an upper surface portion of the crystalline semiconductor layer;

irradiating the crystalline semiconductor layer with laser light to redistribute the impurity;

removing said upper surface portion of the crystalline semiconductor layer, after the irradiation step; and

forming a channel portion of an insulated gate field effect transistor from a remaining portion of the crystalline semiconductor layer,

wherein the remaining portion comprises the impurity.

2. (Canceled)

3. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a crystalline semiconductor layer by heating an amorphous semiconductor layer over a substrate that has an insulating surface after adding a metal element for accelerating crystallization thereto;

introducing an impurity of one conductivity type into an upper surface portion of the crystalline semiconductor layer;

irradiating the crystalline semiconductor layer with laser light to redistribute the impurity;

removing said upper surface portion of the crystalline semiconductor layer, after the irradiation step; and

forming a channel portion of an insulated gate field effect transistor from a remaining portion of the crystalline semiconductor layer,

wherein the remaining portion comprises the impurity.

4. (Canceled)

5. (Original) A method of manufacturing a semiconductor device according to claim 1, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

6. (Canceled)

7. (Original) A method of manufacturing a semiconductor device according to claim 3, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

8. (Canceled)

9. (Currently Amended) A method of manufacturing a semiconductor device according to claim 1, wherein 40 nm or more of the thickness of the <u>upper</u> surface portion is removed.

10. (Canceled)

11. (Currently Amended) A method of manufacturing a semiconductor device according to claim 3, wherein 40 nm or more of the thickness of the <u>upper</u> surface portion is removed.

12. (Canceled)

13. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming an amorphous semiconductor layer having a thickness of 60 nm or more;

crystallizing the amorphous semiconductor layer to obtain a crystalline semiconductor layer;

introducing an impurity element into an upper surface <u>portion</u> of the crystalline semiconductor layer by accelerating the impurity element with the acceleration voltage 30 kV or less;

irradiating the crystalline semiconductor layer with laser light whereby the impurity element is redistributed; and

removing said upper surface portion of the crystalline semiconductor layer, after the irradiating step,

wherein a remaining portion of the crystalline semiconductor layer after the removing comprises the impurity element.

14. (Previously Presented) A method of manufacturing a semiconductor device according to claim 13, wherein a method for crystallizing the amorphous semiconductor layer is selected from one of furnace annealing, radiant heat method, gas heat method and rapid thermal annealing.

15. (Original) A method of manufacturing a semiconductor device according to claim 13, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

16. (Currently Amended) A method of manufacturing a semiconductor device according to claim 13, wherein a thickness of the upper surface portion of the crystalline semiconductor layer removed is 10 nm to 50nm.

17. (Original) A method of manufacturing a semiconductor device according to claim 13, further comprising: patterning the crystalline semiconductor layer to form an island shape.

18. (Original) A method of manufacturing a semiconductor device according to claim 13, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

19. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming an amorphous semiconductor layer having a thickness of 60 nm or more;

introducing an impurity element into an upper surface portion of the amorphous semiconductor layer by accelerating the impurity element with the acceleration voltage 30 kV or less;

irradiating the amorphous semiconductor layer with laser light whereby the impurity element is redistributed;

removing said upper surface portion of the crystalline semiconductor layer,

wherein a remaining portion of the crystalline semiconductor layer after the removing comprises the impurity element.

20. (Original) A method of manufacturing a semiconductor device according to claim 19, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

21. (Currently Amended) A method of manufacturing a semiconductor device according to claim 19, wherein a thickness of the upper surface portion of the crystalline semiconductor layer removed is 10 nm to 50nm.

22. (Original) A method of manufacturing a semiconductor device according to claim 19, further comprising: patterning the crystalline semiconductor layer to form an island shape.

23. (Original) A method of manufacturing a semiconductor device according to claim 19, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

24. (Original) A method of manufacturing a semiconductor device according to claim 1, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

25. (Canceled)

26. (Original) A method of manufacturing a semiconductor device according to claim 3, wherein a concentration of the impurity element in the crystalline semiconductor

layer is 1 x 10^{15} to 5 x 10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

27. (Canceled)

28. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming an amorphous semiconductor layer over a substrate that has an insulating surface;

crystallizing the amorphous semiconductor layer by heat to obtain a crystalline semiconductor layer;

introducing an impurity element into an upper surface portion of the amorphous semiconductor layer by accelerating the impurity element with the acceleration voltage 30 kV or less;

irradiating the crystalline semiconductor layer with laser light whereby the impurity element is redistributed;

removing said upper surface portion of the crystalline semiconductor layer, after the irradiating step,

wherein a remaining portion of the crystalline semiconductor layer after the removing comprises the impurity element.

29. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming an amorphous semiconductor layer over a substrate that has an insulating surface;

adding a metal element for accelerating crystallization to the amorphous semiconductor layer;

crystallizing the amorphous semiconductor layer by heat to obtain a crystalline semiconductor layer;

introducing an impurity element into an upper surface portion of the crystalline semiconductor layer by accelerating the impurity element with the acceleration voltage 30 kV or less;

irradiating the crystalline semiconductor layer with laser light whereby the impurity element is redistributed;

removing said upper surface portion of the crystalline semiconductor layer, after the irradiating step,

wherein a remaining portion of the crystalline semiconductor layer after the removing comprises the impurity element.

30. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

31. (Currently Amended) A method of manufacturing a semiconductor device according to claim 28, wherein a thickness of the upper surface portion of the crystalline semiconductor layer removed is 10 nm to 50nm.

32. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, further comprising: patterning the crystalline semiconductor layer to form an island shape.

33. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

34. (Previously Presented) A method of manufacturing a semiconductor device according to claim 29, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

35. (Currently Amended) A method of manufacturing a semiconductor device according to claim 29, wherein a thickness of the upper surface portion of the crystalline semiconductor layer removed is 10 nm to 50nm.

36. (Previously Presented) A method of manufacturing a semiconductor device according to claim 29, further comprising: patterning the crystalline semiconductor layer to form an island shape.

37. (Previously Presented) A method of manufacturing a semiconductor device according to claim 29, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} $/cm^3$ and in the range of the concentration being ± 10% for an average.

38. (Previously Presented) A method of manufacturing a semiconductor device according to claim 1, wherein the impurity comprises boron.

39. (Previously Presented) A method of manufacturing a semiconductor device according to claim 3, wherein the impurity comprises boron.

40. (Previously Presented) A method of manufacturing a semiconductor device according to claim 13, wherein the impurity element comprises boron.

41. (Previously Presented) A method of manufacturing a semiconductor device according to claim 19, wherein the impurity element comprises boron.

42. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein the impurity element comprises boron.

43. (Previously Presented) A method of manufacturing a semiconductor device according to claim 29, wherein the impurity element comprises boron.

44. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a crystalline semiconductor layer by heating an amorphous semiconductor layer over a substrate that has an insulating surface;

introducing an impurity of one conductivity type into an upper surface portion of the crystalline semiconductor layer;

irradiating the crystalline semiconductor layer with laser light to redistribute the impurity;

removing said upper surface portion of the crystalline semiconductor layer, after the irradiation step;

forming a semiconductor island by etching a remaining portion of the crystalline semiconductor layer; and

forming a channel portion of an insulated gate field effect transistor from the semiconductor island,

wherein the remaining portion comprises the impurity.

45. (Previously Presented) A method of manufacturing a semiconductor device according to claim 44, wherein a source of the laser light is one selected from a continuous wave YAG laser, YVO_4 laser, YLF laser, and $YAlO_3$ laser.

46. (Currently Amended) A method of manufacturing a semiconductor device according to claim 44, wherein 40 nm or more of the thickness of the upper surface portion is removed.

47. (Previously Presented) A method of manufacturing a semiconductor device according to claim 44, wherein a concentration of the impurity element in the crystalline semiconductor layer is 1×10^{15} to 5×10^{18} /cm^3 and in the range of the concentration being ± 10% for an average.

48. (Previously Presented) A method of manufacturing a semiconductor device according to claim 44, wherein the impurity comprises boron.